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Reconstruction of the dynamics of the acetylcholine concentration in the synaptic gap in response to single-quantum signal

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Abstract

The function of the rate of acetylcholine release from the nerve terminal and the function of the activity of acetylcholine esterase in the synaptic gap are reproduced and approximated for the frog nerve-muscle junction using experimental data and a model of the kinetics of activation of choline receptors. These functions can be used to model the effect of blockers and other biogenic postsynaptic modulators on the synaptic transmission.

Keywords

Acetylcholine esterase activity, Acetylcholine release rate, Modeling